

Claims:

1. A protein having a splice factor activity in plants,) characterized in that it
- 5 ⑩comprises the amino acid sequence of the protein according to Fig. 1A of the appendix, or
- ⑩comprises the sequence of the amino acids 1 to 4, 7 to 19, 10 45 to 52, 111 to 116, and 149 to 153 of the protein according to Fig. 1A of the appendix and has more than 85% similarity with this protein, or
- 10 ⑩comprises more than 60% similarity with the splice proteins atSRp34/SR1 and SF2/ASF according to Fig. 2 of the appendix, wherein the G-rich sequence, which corresponds to the amino acids 85 to 113 of the 15 atSRp34/SR1 protein is substituted by an S-rich sequence, or
- ⑩corresponds to, or is derived from, the protein corresponding to Fig. 1A from a plant other than Arabidopsis thaliana.

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2. A protein according to claim 1, characterized in that it comprises the sequence of the amino acids 1 to 4, 7 to 19, 22 to 72, 74 to 85, 96 to 141, 149 to 153, 156 to 172, with amino acid 168 being variable, yet not D or N, of the 25 protein according to Fig. 1A of the appendix.
3. A protein according to claim 1 or 2, characterized in that it comprises an amino acid sequence having at least 90% identity with the sequence of the amino acids 1 to 85

and 96 to 222 of the protein according to Fig. 1A of the appendix.

4. A protein according to any one of claims 1 to 3,
5 characterized in that it comprises an amino acid sequence
that has at least 95%, in particular at least 98%, identity
with the sequence of the amino acids 1 to 85 and 96 to 222
of the protein according to Fig. 1A of the appendix.

10 5. A nucleic acid molecule, characterized in that it
①comprises a nucleic acid sequence according to Fig. 1A of
the appendix, or
②comprises a nucleic acid sequence encoding a protein
according to any one of claims 1 to 4, or
15 ③comprises a nucleic acid sequence which, under stringent
conditions, binds to the nucleic acid molecule according
to Fig. 1A of the appendix and encodes a splice protein
active in plants or is complementary thereto.

20 6. A biologically functional vector, characterized in
that it comprises a nucleic acid molecule according to
claim 5.

7. A system comprising a nucleic acid which encodes a
25 protein according to any one of claims 1 to 4, and a
nucleic acid which encodes
①the atSRp34/SR1 protein of *Arabidopsis thaliana* or
②the protein corresponding to Fig. 1A of the appendix from
a plant other than *Arabidopsis thaliana*, or
30 ③a protein derived from these proteins,

wherein at least one of the nucleic acids is under the control of a promoter not naturally connected with these nucleic acids.

5 8. A system according to claim 7, characterized in that both nucleic acids are controlled by promoters which are not naturally connected with these nucleic acids.

10 9. A system according to claim 7 or 8, characterized in that at least one of the promoters under whose control the nucleic acids are is an inducible promoter.

15 10. A system according to any one of claims 7 to 9, characterized in that the nucleic acid coding for a protein according to any one of claims 1 to 4 is under the control of a promoter which causes an overexpression of this protein.

20 11. A system according to any one of claims 7 to 10, characterized in that the nucleic acid which encodes a protein according to any one of claims 1 to 4 is under the control of a promoter which, under defined conditions, prevents the expression of this protein and, under defined other conditions, enables the expression of this protein.

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12. A transgenic plant or plant cell, characterized in that it expresses a protein according to any one of claims 1 to 4.

13. A transgenic plant or plant cell, characterized in that it comprises a nucleic acid molecule according to claim 5 or a vector according to claim 6.

5 14. A transgenic plant or plant cell, characterized in that it comprises a system according to any one of claims 7 to 11.

10 15. The use of a protein according to any one of claims 1 to 4 of a nucleic acid according to claim 5, of a vector according to claim 6 or of a system according to any one of claims 7 to 11 for changing the splice properties of a plant cell or of a plant.

15 16. The use of a protein according to any one of claims 1 to 4, of a nucleic acid according to claim 5, of a vector according to claim 6 or of a system according to any one of claims 7 to 11 for changing the development behavior of a plant.

20 17. The use of a protein according to any one of claims 1 to 4, of a nucleic acid according to claim 5, of a vector according to claim 6 or of a system according to any one of claims 7 to 11 for retarding the flower formation of plants.

25 18. The use according to claim 17, characterised in that the retardation of the flower formation relative to the wild-type is at least 15%, preferably at least 25%.